Book Review

A comprehensive approach to congenital heart diseases

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Understanding the field of congenital heart disease can be an intimidating task. To understand the underlying lesions requires knowledge of embryology, genetics, anatomy, and physiology. To appropriately care for these patients requires an understanding of cardiac imaging, cardiac catheterization, electrophysiology, and cardiac surgery. Advances in cardiac imaging techniques, including foetal echocardiography, cardiac magnetic resonance imaging, and computed tomography angiography have helped to revolutionize the diagnosis and management of these lesions, in both children and adults. Attempting to master this broad area of knowledge can be overwhelming to many learners. Many textbooks are available that focus on individual areas such as echocardiography, paediatric cardiology, or adult congenital heart disease, but few have attempted to cover the wide range of issues facing patients with congenital heart disease over the course of their life.

A comprehensive approach to congenital heart diseases is truly what it claims to be: comprehensive. In this very ambitious undertaking, Editor-in-Chief I.B. Vijayalakshmi and Editors P. Syamuasundar Rao and Reema Chugh provide an incredibly thorough approach to congenital heart disease, covering everything from basic embryology to heart and lung transplantation for congenital heart disease. As stated in the epilogue, the editors used the approach of ‘A Long Journey’ to describe the management of congenital heart disease through the various stages, often called the ‘womb to tomb’ approach.

The editors undertook a formidable challenge by covering all aspects of congenital heart disease at all stages of life. The book is over 1000 pages, but is nicely organized and divided into 13 sections, beginning with an approach to embryology and management of neonates with congenital heart disease. Section 2 covers the basics of anatomy, nomenclature, imaging, and bedside approach to diagnosis. The individual lesions are covered in separate chapters, each grouped into sections including shunt defects, obstructive lesions, valvular lesions, aortic diseases, cyanotic defects, and cardiomyopathies. A separate section covers the management of electrophysiological issues in children. The final section deals with general issues facing all patients with congenital heart disease, including the importance of oral health, management of anaesthesia, non-cardiac surgery, and post-operative issues, as well as heart and lung transplantation.

The chapters covering the various lesions all follow the same layout, covering the basic pathophysiology and genetics of the lesion as well as a historical perspective. The presenting features, exam findings, and diagnostic testing are then discussed. The illustrations are clear and easy to follow and help reinforce the concepts discussed in the text. Each chapter is filled with examples of typical ECG, chest X-ray, echo, and angiographic findings. There is a separate chapter discussing the uses of cardiac magnetic resonance imaging and computed tomography angiography. The management of each lesion is then discussed. Tables are used to highlight important points and references are provided for each chapter.

The section devoted to congenital heart disease in adults covers many very important topics, including transition of care, pregnancy, contraception, and gynaecological issues, exercise, and psychosocial issues. A review of management of lesions discovered for the first time in adulthood is also provided, as well as management of the cyanotic patient.

This book is an excellent reference for anyone wanting to learn more about congenital heart disease. For the student or trainee looking for an introduction to the field, this book starts at the beginning with embryology and nicely outlines issues related to nomenclature and diagnosis of each lesion. For the more advanced learner, this is an excellent reference that covers the entire spectrum of congenital heart disease.

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